

5 What is claimed is:

1. A composite papermaking fabric comprising:

 an upper fabric formed of warp yarns, fabric born warp yarns and upper weft yarns interwoven to provide a support surface formed in a one up, one down weave pattern;

10 a lower fabric formed of fabric born warp yarns and lower weft yarns interwoven to provide a weft yarn dominated contact surface;

 each said fabric born warp yarn weaving over at least one of said upper weft yarns during each repeat of said weave pattern forming binding points binding said upper fabric with said lower fabric.

15 2. The composite papermaking fabric of claim 1, wherein said warp yarns weave during each repeat of said weave pattern with a major portion of said upper weft yarns and wherein said fabric born warp yarns weave only with a minor portion of said upper weft yarns to form the upper fabric weave pattern.

 3. The composite papermaking fabric of claim 1 or claim 2 wherein each
20 said fabric born warp yarn weaves over at least two of said upper weft yarns forming two binding points spaced longitudinally of said weave pattern.

 4. The composite papermaking fabric of any preceding claim wherein said binding points form a broken twill line across said weave pattern.

 5. The composite papermaking fabric of any preceding claim wherein said
25 upper warp yarns float beneath said upper weft yarns at said binding points forming

5 supports for said weft yarns at said binding points which act to maintain knuckle height uniform across said support surface.

6. The composite papermaking fabric of any preceding claim wherein said fabric born warp yarns weave with said weft yarns of said lower fabric in a broken twill pattern forming a plurality of weft yarns float on the contact surface.

10 7. The composite papermaking fabric of claim 6 wherein there are a plurality of said weft floats per lower fabric weft yarn per weave pattern repeat.

8. The composite papermaking fabric of any preceding claim, wherein said weave pattern comprises equal numbers of said warp yarns and said fabric born warp yarns.

15 9. The composite papermaking fabric of any preceding claim wherein said weave pattern comprises eight of said warp yarns, eight of said fabric born warp yarns and forty of said weft yarns per weave pattern repeat.

10. The composite papermaking fabric of any preceding claim wherein the ratio of upper weft yarns to lower weft is 2 : 1 or 3 : 2 or 5 : 3.

20 12. The composite papermaking fabric of any preceding claim wherein the weave repeat is at least 16 shaft weave repeat.

13. A composite papermaking fabric comprising an upper fabric formed with a support surface woven in a one up, one down weave pattern and a lower fabric formed with a weft dominated contact surface;

25 a plurality of warp yarns weaving with upper weft yarns in a selected first

5 weave pattern forming warp knuckles over said support surface;

a plurality of fabric born warp yarns weaving with lower weft yarns and said upper weft yarns in a selected second weave pattern;

said fabric born warp yarns and said lower weft yarns forming said lower fabric and said fabric born warp yarns and said upper weft yarns forming binding knuckles
10 with said upper weft yarns at selected locations over said support surface, said binding knuckles binding said upper fabric with said lower fabric; and said binding knuckles cooperating with said warp knuckles of said support surface to form said support surface with said one up, one down weave pattern.

14. The composite papermaking fabric of claim 13 wherein said warp yarns
15 weave beneath each said upper weft yarn at each of said selected locations beneath providing vertical support for said upper weft yarn and said binding knuckle.

15. The composite papermaking fabric of claim 13 or claim 14 wherein said weft yarn of said contact surface form two floats per pick per weave pattern repeat.

16. The composite papermaking fabric of any preceding claim wherein the
20 wearside fully or partially consists of wear resistant yarns.